

# Program Notice

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## REQUIREMENTS FOR AUXILIARY CONTROL MODIFICATIONS OF DIVERTER-TYPE MECHANICAL SAMPLING SYSTEMS

### 1. PURPOSE

This program notice transmits requirements for the installation of auxiliary controls and plug sensors that affect the operation of an officially approved diverter type (D/T) mechanical sampler.

### 2. BACKGROUND

With the increase in the number of shuttle train loading sites and almost continuous loading of grain at many rail loading locations, some existing D/T sampler installations are being modified to prevent grain backing up the load out spout from impairing or damaging the D/T sampler. Depending on the loading rate and distance from the spout end to the sampler, grain can quickly fill the available space in the railcar and back up the spout to the sampling system.

An auxiliary control can be installed that uses a “plugged-flow switch” in the spout to trigger the D/T system to stop in a safe state, and to control the flow of grain. However, these auxiliary controls can also affect the representativeness of the sample if they reset the D/T timer or stop the sampler while grain is still flowing.

Proper sampling of a grain stream requires that the sampler take regular cuts at a constant time interval, and that all parts of the grain stream have an equal chance of being sampled. These requirements are violated if the sampler is stopped while grain is still flowing, or if the time interval is temporarily lengthened by resetting the timer, or if sampler cuts are synchronized to an event in the grain handling system. The requirements in this program notice are intended to prevent these conditions from developing, while allowing the auxiliary control to protect the sampler from damage.

### 3. POLICY

Any modification of a sampling system used for official purposes must not compromise the representativeness of the sample. A grain elevator must conform to the following requirements if the grain elevator elects to modify a D/T sampling system to control grain choke conditions:

- a. Grain flow into the sampler must stop whenever the sampler is stopped.
- b. An audible alarm must activate whenever the D/T sampler is stopped by an auxiliary control.

- c. If already in motion, the D/T pelican must complete the traverse and come to the normal rest position.
- d. If the sampler is stopped the timer shall not reset. The timer may continue running with the pelican traverse disabled, or it may halt until the plugged condition is cleared. When the plugged condition has cleared, normal timer operation shall resume with the time that remained when the timer halted.
- e. The plug of grain that caused stoppage of the D/T must be cleared from the sampler before the sampler is restarted. Additionally, the D/T must be restarted **before** grain begins to flow into the sampler.
- f. Official inspection personnel must maintain full control of auxiliary controls for D/T samplers. The facility control system may stop the grain flow. However, the controls that stop the D/T sampler and which activate the alarm must remain independent of the plant control system and utilize seals or locks to assure security of the controls.

#### **4. APPLICATION**

This policy applies to new installations; to existing sampling systems modified after their approval by the Federal Grain Inspection Service (FGIS), but prior to the issuance of this notice; and to FGIS-approved systems that a facility intends to modify with an auxiliary control. The D/T sampler authorization submitted by the grain facility must address auxiliary controls included in any new installation.

Sampling systems that are modified with auxiliary controls after the issuance of this notice must have the modifications approved by official service providers before using them for official purposes.

Previously approved systems that were modified before the issuance of this notice must comply with these requirements by September 1, 2008. Until that time the sampling systems are approved for continued use. However, if the D/T sampler is stopped by an auxiliary control, a probe sample is required for the affected railcar in lieu of the D/T sample. FGIS will revoke authorization for any sampling system that does not comply with these requirements by September 1, 2008.

#### **5. ALTERNATE SAMPLING METHOD**

Depending on the D/T timer setting, and the distance between the D/T sampler and the scale/spout shut-off slide, grain may pass through the D/T sampler without being sampled after the D/T has been restarted due to a plugged spout condition. When this condition exists where all grain is not accessible for D/T sampling, official personnel must use the probe sampling method for the affected carrier.

**6. RESPONSIBILITIES**

Official service providers are responsible for reviewing and testing D/T sampler systems under their jurisdiction, verifying that any modifications of the system meet the requirements of this notice, and documenting the approval of the systems. Additionally, when alteration work begins, official personnel must suspend the authorization of the affected sampling system until the alteration is completed and approved.

Grain companies that intend to modify D/T samplers are responsible for contacting the appropriate official service provider to inform them when modifications or alterations to an approved sampling system are planned, and to provide necessary documentation.

**7. FILING INSTRUCTIONS**

Retain this notice with the Mechanical Sampling Systems Handbook until this information is incorporated into the handbook.

**8. QUESTIONS**

Direct any questions to James McLaurin, [james.h.mclaurin@usda.gov](mailto:james.h.mclaurin@usda.gov) at 816-891-0479, or Larry Engebretson, [larry.r.engebretson@usda.gov](mailto:larry.r.engebretson@usda.gov) at 816-891-0467.

*/s/ John Giler*

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